

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

To:

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Date of mailing
(day/month/year)

12/01/2006

Applicant's or agent's file reference

861-16-088PC

PAYMENT DUE

within **ONE MONTH** from
the above date of mailing

International application No.

PCT/US2004/033125

International filing date
(day/month/year)

07/10/2004

Applicant

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

1. This International Searching Authority

- (i) considers that there are 6 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

see annex

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

EUR 1.550,00 x 5 = EUR 7.750
Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



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Fees Due

2/12/06

CALENDAR FOR

ACTION

CALENDAR ENTRY

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
see 'Invitation to pay additional fees'
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 806 417 A (NELBOECK HOCHSTETTER M,DT ET AL) 23 April 1974 (1974-04-23) column 2, lines 42-45 abstract claims 4,7,13 column 3, lines 59-75 column 4, lines 43-63 -----	1-5
X	US 4 822 867 A (ERHAN ET AL) 18 April 1989 (1989-04-18) abstract column 1, line 57 - column 6, line 46 -----	1-5
X	US 5 260 396 A (KRONER ET AL) 9 November 1993 (1993-11-09) claim 1 column 7, lines 20-38 column 2, line 50 - column 3, line 23 column 4, lines 5-52 -----	1,3-5
X	US 5 207 941 A (KRONER ET AL) 4 May 1993 (1993-05-04) column 7, lines 4-27 column 4, line 33 - column 5, line 13 abstract ----- -/--	1,3-5

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

**Annex to Form PCT/ISA/206
COMMUNICATION RELATING TO THE RESULTS
OF THE PARTIAL INTERNATIONAL SEARCH**

International Application No
PCT/US2004/033125

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 41 08 170 A1 (BASF AG, 6700 LUDWIGSHAFEN, DE) 17 September 1992 (1992-09-17) abstract page 5, lines 28-40 page 2, line 66 - page 4, line 3; claim 1 -----	1,3-5
P,X	DE 102 38 176 A1 (CTP PAPIERHILFSMITTEL GMBH & CO. KG) 4 March 2004 (2004-03-04) page 3, paragraphs 16,21 page 3, paragraphs 23,25 -----	1
A	FR 2 655 048 A (INSTITUT NAL SANTE RECHERC MEDIC; INST NAT SANTE RECH MED) 31 May 1991 (1991-05-31) abstract; claims 1-16 -----	1-5
A	US 4 806 610 A (ERICKSON ET AL) 21 February 1989 (1989-02-21) claims 1-4 -----	1-5
A	EP 0 263 658 A (GENCORP INC) 13 April 1988 (1988-04-13) claims 1-7 -----	1-5

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5

A method of forming a protein-polymer conjugate comprising reacting a monomer with a chemically activated site on a protein, or a protein modified to include polymerisation initiation sites.

2. claim: 6

An independent further method of forming a protein polymer conjugate which is not dependent on any previous claim, comprising modifying a protein to be reactive with a monomer and reacting the modified protein with said monomer.

3. claim: 7

A further independent method of forming a protein polymer conjugate which specifically comprises modifying a protein to have a bromoisobutyrate functionality as described in application claim 7.

4. claim: 8

A further independent method of forming a protein polymer conjugate comprising the specific modifying of a protein by reacting with propylmercapto-pyridine-2-bromoisobutyrate and then forming a conjugate by reacting with N-isopropylacrylamide.

5. claims: 9-11

An independent further method of forming a protein polymer conjugate comprising specifically modifying a protein by interacting with a bromoisobutyrate-modified biotin initiator as described in the application claim 9.

6. claim: 12

An independent protein polymer product as described in application claim 12.

It is immediately clear that the present application claims contain several distinct and different inventions for the following reasons :
- "a priori" lack of unity : The present application claims contain at least 6 separate and different independent inventions as outlined and

detailed by the above attached analysis of the technical features of each separate invention. Each of these said 6 distinct inventions are independent from each other and each relates to a different method of forming a protein polymer conjugate or an independent protein polymer product. Consequently it is immediately clear that the present application is non-unitaire (W11/89).

- "a posteriori" lack of unity : The present application claims contain several inventions in consideration that the "corresponding technical features" of a method of forming a protein polymer as described in the application claim 1 are not considered to be novel and inventive in view of the disclosures of US3806417, US4822867, US5260396, US5207941, DE4108170, DE10238176 etc. (see search report).

In view of this consideration, the application clearly does not contain any "special" technical features within the meaning of Rule 13.2 PCT, that is technical features that define a contribution over the prior art, and thus the present application does not meet the requirements of Rule 13.1 PCT for lack of unity.

Consequently, it is again clear that the present application does not contain a single invention, but rather relates additionally to several other different and distinct inventions as addressed and detailed by the above attached analysis of the technical features of each separate invention.

As a result of this clear "a priori" and "a posteriori" lack of unity, the first invention only has been searched which has resulted in application claims 1-5 only having been searched. The applicant is invited to choose which of the other further inventions he wishes to pursue.

Patent Family Annex

Information on patent family members

International Application No

PCT/US2004/033125

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3806417	A	23-04-1974	AR 194231 A1	29-06-1973
			AT 317424 B	26-08-1974
			CH 581663 A5	15-11-1976
			DE 2128743 A1	21-12-1972
			DK 133009 B	08-03-1976
			FR 2140541 A1	19-01-1973
			GB 1357861 A	26-06-1974
			HU 166074 B	28-01-1975
			IL 39339 A	25-06-1975
			IT 951435 B	30-06-1973
			JP 56031950 B	24-07-1981
			NL 7207183 A	12-12-1972
			SE 415660 B	20-10-1980
			SU 463268 A3	05-03-1975
			ZA 7203168 A	28-03-1973
US 4822867	A	18-04-1989	NONE	
US 5260396	A	09-11-1993	NONE	
US 5207941	A	04-05-1993	CA 2042089 A1	19-11-1991
			DE 4016002 A1	21-11-1991
			EP 0457205 A2	21-11-1991
			ES 2082037 T3	16-03-1996
			JP 4227999 A	18-08-1992
DE 4108170	A1	17-09-1992	NONE	
DE 10238176	A1	04-03-2004	AU 2003253318 A1	08-04-2004
			WO 2004026927 A1	01-04-2004
			EP 1532184 A1	25-05-2005
FR 2655048	A	31-05-1991	WO 9108242 A1	13-06-1991
US 4806610	A	21-02-1989	NONE	
EP 0263658	A	13-04-1988	NONE	